

Scanning the Past

Electrical Poetry

Electrical engineers properly hold James Clerk Maxwell in high esteem for his electromagnetic field equations and other contributions. They may be less familiar with Maxwell's poetry which often had an electrical theme and also exhibited his keen sense of humor.

Shortly after the failure of attempts to install a transatlantic telegraph cable in 1857, Maxwell composed a poem of four stanzas entitled "The Song of the Atlantic Telegraph Company." He used the symbol ∇ as a shorthand way to express the frequently repeated phrase "Under the sea, under the sea." Thus the last stanza read:

∇
There let us leave it for fishes to see;
 ∇
They'll see lots of cables ere long,
For we'll twine, twine, twine,
And spin a new cable, and try it again,
And settle our bargains of cotton and grain,
With a line, line, line,
A line that will never go wrong.

Another Maxwell poem was titled "To the Chief Musician upon Nabla." A note explained that nabla was actually the name of an Assyrian harp that had the shape ∇ and that the symbol had come to represent a quaternion operator invented by W. R. Hamilton. Maxwell noted that P. G. Tait had been the first to discuss fully the use and properties of the operator and that Tait was thus called the "Chief Musician upon Nabla." Maxwell himself became quite a virtuoso on the nabla operator as may be seen from reading his classic work *A Treatise on Electricity and Magnetism* first published in 1873.

The growth of the telecommunications and the electric light and power industries during the late 19th century stimulated others to wax poetic on the pages of electrical trade journals such as *Electrical World*. Some electrical poetry addressed public policy issues. For example, concern over the proliferation of utility poles with overhead wires along the streets of New York City was the theme of a poem titled "The Unburied Wires," which appeared in a January 1886 issue of *Electrical World*. The first verse read:

The telegraphic spider spreads
His web above the people's heads
For miles and miles

On ugly poles that block the ways
The wires are hung, an endless maze
And Cyrus smiles.

while verse four concluded that:

Before another year can pass
The poles of every style and class
Must feed the fires,
And we must hide beneath the stones,
Though Cyrus sighs and Jay Gould groans,
The web of wires.

The exuberance of an age of marvelous inventions is apparent in another poem that also appeared in *Electrical World* in 1886 with the title "The Polychromotelephantophotophonograph." The first of 18 verses read:

A long-haired scientific erank once lived on Russian
Hill:
The march of science failed to march with his ambitious will—
And his very last invention, which increased his fame
by half,
Was the Polychromotelephantaphotophonograph!

The remaining verses explained the remarkable capabilities of the instrument which could handle "fifteen languages and eighty dialects" while connected to cities around the world. Unfortunately, a brief moment of inattention by the professor-inventor caused the device to explode and in the process to polychrome him "like an erudite giraffe."

A more recent example of electrical poetry was used by the legendary electrical engineering educator, William L. Everitt, to introduce transmission line theory.

There was a dachshund once so long
He hadn't any notion
How long it took to notify
His tail of an emotion
And so it was that though his eyes
Were filled with woe and sadness
His little tail went wagging on
Because of previous gladness.

James E. Brittain
School of History, Technology, and Society
The Georgia Institute of Technology